Math League News

■ **Our Calculator Rule** Our contests allow both the TI-89 and HP-48. You may use any calculator without a QWERTY keyboard.

■ **Send Your Comments** to comments@mathleague.com.

■ **Contest Dates** Future HS contest dates (and alternate dates), all Tuesdays, are December 13 (Dec. 20), January 10 (Jan. 17), February 14 (Feb. 21), and March 14 (Mar. 21). (Each alternate date is the Tuesday following the official date.) For vacations, special testing days, or other *known* disruptions of the normal school day, please *give the contest on the following Tuesday.* If your scores are late, please submit a brief explanation. We reserve the right to refuse late scores lacking an explanation. We sponsor an *Algebra Course I Contest* in April, as well as annual contests for grades 4, 5, 6, 7, & 8. See *www.mathleague.com* for information.

■ **Regional Groupings** Within guidelines, we try, when possible, to honor regional grouping requests for the next school year.

■ **What Do We Print in the Newsletter?** Space permitting, we print every solution and comment we receive. We prepare the newsletter early, so we can use only what we have at that time.

■ **How Do I Change the Spelling of a Student Name?** Please note that an advisor can always return to the Score Report Center to change the spelling of a student's name or to correct a score. We stay out of the loop on such changes. Any advisor noticing a need for such changes should feel free to make them directly.

■ **Can I Add Additional Names and Scores to an Earlier Contest?** One advisor asks, "Since some students did very well in the second contest, can we add their names (with the scores) to the Contest 1 report?" We always allow adding additional names and scores to an earlier contest as long as the additions do not affect the team total previously submitted for the earlier contest.

■ **Administer This Year's Contests Online** Any school that is registered for any of our contests for the 2022-2023 school year may now register at **www.online.mathleague.com** for the 2022-2023 Online Contests at no cost. The advantages of administering the online versions of our contests rather than the paper and pencil ones are that you do not have to grade your students' papers and that you do not have to submit any scores at our Score Report Center – these tasks are done automatically for you when your students take our contests online. If you decide to use this free service, you must set up your account and set the day you will administer each contest at least one day in advance of the actual contest date.

■ **General Comments About the Contest** Catherine Van-Netta said, "We're not doing so great, but we are sure enjoying the problems! We'll get better!" Roger Finnell said, "Why was this contest much harder than usual?" Sean Turkington said, "Not sure what it was exactly, but my team found this discouragingly hard."

■ **Question 2-1: Comment** Robert Moorewood said, "#1 proved challenging again - for reading! Too many of our students went looking for the greatest CUBE from the digit product of integers less than 2022...(Not a bad follow-up question.)"

■ **Question 2-3: Comments and Appeals (Rejected)** Pam Benne said, "Many missed 2-3 because they did not consider for example 3/1 as being in lowest terms." In fact, several of our advisors, including Eric Berkowitz, Josh Frost, Lee Kim, Peter Knapp, and Beth Trilling, submitted appeals along the same lines, advocating for 53 or 53% to be an acceptable answer. As Peter Knapp put it, "I had multiple students confused about whether fractions such as 4/1 are considered to be in lowest terms, since they can be simplified to whole numbers, making writing the fraction unnecessary. If these are dismissed, the correct answer becomes 53." Our Appeals Committee has denied this appeal based on the definition of lowest terms. The definition states "A fraction is in lowest terms if its numerator and denominator are relatively prime, that is, they have no common factor other than 1." A fraction such as 2/2 is not in lowest terms since the numerator and the denominator have a common factor of 2. Fractions such as 1/1 or 2/1, however, ARE in lowest terms since the only common factor of the numerator and denominator is 1. (Note that even the proposed answer of 53 or 53% includes a fraction such as 3/2 as being in lowest terms even though it can be simplified further to 1 1/2, so further simplification being possible is clearly not disqualifying.)

■ **Question 2-4: Comment and Alternate Solution** Robert Moorewood said, "I particularly liked #4 - I like geometric decompositions! But one of our students just computed the width, as $(\sqrt{360})/3$, and height, as $(\sqrt{360})/2$, and did base times height over 2."

Statistics / Contest #2
Prob #, % Correct (*all reported scores*)

Prob #	% Correct	Prob #	% Correct
2-1	47%	2-4	33%
2-2	66%	2-5	15%
2-3	22%	2-6	4%